



A summary of the FRPAA and open access debate

Outline

Pages 1-3: FRPAA and open access summary

Pages 4-12: data and additional information

This document details the proposed Federal Research Public Access Act of 2009 (FRPAA, pronounced “firpah”), S. 1373. It also contains pertinent information, arguments, and data about the current debate over open access (OA). It is an imperative read for anyone lobbying for FRPAA.

The FRPAA synopsis:

http://www.taxpayeraccess.org/issues/frpaa/frpaa_resources/overview.shtml

A brief overview of OA, with a link to a more detailed overview:

<http://www.earlham.edu/~peters/fos/brief.htm>

The basic argument for OA:

1. Researchers want their work to be openly (publicly) available to maximize its access, uptake, usage, applications, impact and progress.
2. The Internet has emerged as a method to cheaply and easily disseminate knowledge.
3. In the case of FRPAA, the research was funded by the public, so it should be available to the public.

Using the Internet, researchers should be able to share their knowledge with others. However, the current model, in which researchers pay to submit their work to peer-reviewed journals without compensation and others pay to access that work, prevents some parties from accessing the work because of financial constraints.

The argument for FRPAA:

The concept of FRPAA is pretty simple: scholarly authors whose work is funded by large government agencies will have to provide those agencies with the final manuscripts within six months after publication in a peer-reviewed journal. This means the articles *still have to be peer-reviewed*, so there's no need to worry that the publications will lack quality. And since the articles will first be published in the journals, the journal publishers will retain their subscribers because subscribing libraries will want to access the research immediately upon publication. Either way, government-funded research doesn't make up the whole of any large journal's articles, so subscribers will still want to get the journals to be able to access those other (non-government-funded) articles.

Basically, FRPAA ensures that government-funded research, which was paid for by the public and freely given by academic authors to publishers, is accessible to the public, though not necessarily immediately upon publication. This means the public can track how its money is being spent, and any interested parties can use the research to further human knowledge.

It just makes sense.

Unfortunately, the publishing industry wants to maintain the status quo, because they're currently raking in huge profits (see data below) and, in the case of those that are for-profit public companies, they are legally obligated to maximize their shareholders' profits. This means that some (not all) in the publishing industry have worked to develop smear campaigns against OA, using misleading and downright false statements (such as "OA will lead to the end of peer review") to keep FRPAA from becoming a law. Since they have huge profits, they have huge amounts of money to spend on these smear campaigns, and so far it has worked – FRPAA was originally introduced in May of 2006 but was not passed into law. Now, the tide is turning, as more and more parties are starting to recognize the potential benefits of OA and PA.

The National Institutes of Health (NIH) currently has a FRPAA-like mandate for its research that is successful. This is a very important point, because the NIH is one of the largest public research funders, so if OA can work there, it can work at other government research funding agencies.

Even if FRPAA does lead to open access and to the lessening of profits made by large publishers, is this bad? We think not. Other models for journal publishing have emerged – the most promising is one in which authors pay to submit articles, which are then peer-reviewed, finalized, and published. Charges like this are not unprecedented, in that the current subscription-based model also sometimes charges authors to have their articles published. The new model eliminates the cost for accessing articles, thus increasing readership, especially for audiences outside large research universities.

Additionally, Harvard, along with MIT, UC-Berkeley, Cornell, and Dartmouth, recently formed a compact to ensure that, when needed, they will help pay for articles published in OA journals. MIT, Harvard, and Stanford's School of Education also have OA policies. Moreover, there are OA mandates in Australia, Austria, Belgium, Canada, France, Germany, Scotland, and Switzerland, so this is not uncharted territory.

What is definitely not an acceptable alternative for the research community is to refrain from maximizing research access, uptake, usage, applications, impact and progress (by mandating OA) in order to insure publishers' current funding model against the possibility that universal OA might eventually lead to a change in funding model. The publishing industry has to remind itself that *the reason peer-reviewed research is conducted, peer-reviewed and published is not in order to fund the publishing industry, but in order to maximize research access, uptake, usage, applications, impact and progress.*

An excellent response to some congressional questions about the NIH public access policy, with strong data and citations, which could easily apply to FRPAA:

http://www.taxpayeraccess.org/bm~doc/berman_response_08-1201.pdf

Two typical arguments against OA, and counterpoints to those arguments:

1. Journal quality will decrease because there will be no peer review.

Counterargument: False. FRPAA, like most OA, requires peer review, and good OA journals would not exist without peer review because no decent researcher would want to read or publish in a non-peer-reviewed journal. The current existence of successful OA journals (e.g. the Public Library of Science, <http://www.plos.org/>) soundly refutes this point.

2. Publishers will lose significant revenue and this will cause a collapse in the journal publishing industry.

Counterargument: While it's not possible to say they won't lose *any* revenue, the argument that they will lose a lot of revenue is fallacious. For one, embargo periods placed on most OA articles (in the case of FRPAA, 6 months) ensure that only subscribers get the most-recent articles. Also, in the case of FRPAA, not all articles in any journal would fall under FRPAA, so journals would still contain non-OA material. Furthermore, physics has a long-standing OA repository at <http://arXiv.org>, but physics journals have not seen any decline in subscriptions (source: <http://eprints.ecs.soton.ac.uk/11006/>).

Great counterpoint to the argument that OA will lead to the demise of peer review:
<http://www.earlham.edu/~peters/fos/newsletter/09-02-07.htm#peerreview>

Two common arguments against FRPAA, and counterpoints to those arguments:

1. Public access equates to government censorship.

Counterargument: False. The government will not censor FRPAA articles or determine where they are published. It will merely ensure that they are available to the public.

2. The government is trying to take possession of publishers' intellectual property.

Counterargument: False. Publishers normally require authors to forfeit their copyrights, which authors do free. FRPAA would not change that – FRPAA would make it such that the government would ensure that the articles are freely available online, but the government would not take exclusive copyright.

SUMMARY

FRPAA would provide open access to publicly-funded research, utilizing the great capacity of the Internet to disseminate knowledge. It would maximize the access, uptake, usage, applications, impact and progress of research. While deep-pocketed publishers and their lobbyists would like to maintain the status quo and have used false and misleading arguments to do so, FRPAA represents a major advancement toward a society in which knowledge is shared freely and scholarly advancement is no longer impeded by the need for profit.

Further Information Regarding Open Access

Countering the misleading and false arguments against OA:

SPARC (the Scholarly Publishing and Academic Resources Coalition) released a letter to its members about "PRISM" on September 6, 2007. It was written by Heather Joseph, SPARC's Executive Director. Excerpt:

I'm writing to bring to your attention the recent launch of an anti-open access lobbying effort. The initiative, called "PRISM – the Partnership for Research Integrity in Science and Medicine", was launched with development support from the Association of American Publishers and specifically targets efforts to expand public access to federally funded research results - including the National Institute of Health's Public Access Policy.

The messaging on the PRISM Web site, which is aimed at key policy makers, directly corresponds to the PR campaign reportedly undertaken by the AAP earlier this year. As Nature reported in January, AAP publishers met with PR "pit bull" Eric Dezenhall to develop a campaign against the "free-information movement" that focuses on simple messages, such as "public access equals government censorship," and suggested that "the publishers should attempt to equate traditional publishing models with peer review". News of this proposed campaign met with immediate and heavy criticism in the academic community.

The new PRISM Web site closely tracks with the recommended PR strategy, highlighting messages that include:

- * Public access/open access will destroy the peer review system
- * Public access equals government censorship
- * The government is trying to expropriate publishers' intellectual property

This campaign is clearly focused on the preservation of the status quo in scholarly publishing (along with the attendant revenues), and not on ensuring that scientific research results are distributed and used as widely as possible. The launch of this initiative provides a timely opportunity for engaging faculty members, researchers, students and administrators in dialogue on important issues in scholarly communications.

To assist in this conversation, the Association of Research Libraries has prepared a series of talking points (<http://www.arl.org/bm%7Edoc/issue-brief-aap-pr-prism.pdf>) that explicitly address each of the PRISM messages listed above.

The reaction to the launch of PRISM by the academic research community has been immediate and quite strong. Of particular note are reactions by these important constituencies:

- 1) Some publishers have called for the AAP to post a disclaimer on the PRISM Web site, indicating that PRISM does **not** represent their views on the issues of open access and public access. (See open letter at <https://mx2.arl.org/Lists/SPARC-OAForum/Message/3941.html> from Mike Rossner, Executive Director of Rockefeller University Press.)

2) Some journal editors have also expressed displeasure with the initiative. For example, Tom Wilson, Editor (and Founder) of the International Journal of Information Management, resigned from that editorial board in protest of Elsevier's involvement with PRISM (<http://www.free-conversant.com/irweblog/879>).

Others, including Peter Murray Rust of the University of Cambridge (UK), have written (<http://wmm.ch.cam.ac.uk/blogs/murrayrust/?p=525>) to publishers with which they are affiliated as author or editor and asked them to take action to publicly disassociate themselves with PRISM.

3) Researchers are also questioning how their choices may result in unwanted association with PRISM. Some are calling (<http://network.nature.com/blogs/user/smount/2007/08/29/prism-distorts-our-view-of-the-open-access-debate>) for colleagues to register displeasure over publishers' involvement with PRISM by reconsidering submitting work, reviewing, or editing for publishers who support the coalition. Others are going even further, calling (<http://phylogenomics.blogspot.com/2007/08/calling-for-boycott-of-of-aap.html>) for a boycott of those publishers.

PRISM developments will be of interest to many on campus - including those who follow open access and anyone who is involved with PRISM publishers as an author, editor, or subscriber. Please feel free to share this information. To stay abreast of related news, visit the SPARC Web site: <http://www.arl.org/sparc>.

More arguments against open access and how they may be addressed:

Argument #1: "Scholarly societies (especially the smaller ones) will be negatively affected by open access and their journals will be threatened."

Counterargument: There is no empirical evidence that even when all articles are freely available, journals are cancelled. In physics, there's been 100% open access via <http://arXiv.org>, and no wholesale cancellations of journals (source: <http://eprints.ecs.soton.ac.uk/11006/>). Even if there is something peculiar about physics, and there's some impact on journals due to OA, some price pressure would be ok in this market. The pressure would be on the International Association of Scientific, Technical, and Medical Publishers (STM) journals, not the small and inexpensive society journals.

Additionally, journals will still be needed for their value-added services – peer review logistics, copy editing, type setting, maintaining web sites – and in a capitalist system like ours, if there's money to pay for these subscriptions (which there is, it's already being used to pay for them) and if there's value added, someone will find an economic model that works to keep the journals alive. Perhaps the model will not be a subscription model, but some model will emerge.

Furthermore, the old economic model doesn't apply any more, and journals will need to respond to that. The marginal costs to distribute are zero, and this allows for a new model of distributing scholarly articles, which is what we are trying to get to.

The issue of journals dying is moot because this would only be an issue if all journals have switched their models, and if that's the case, the whole environment would be so different that our current thinking is not relevant. It's important to focus on the 'macro argument' for

this reason: The money is in the system. We'd be able to access it in whatever model emerges.

Argument 2. "Open access fees for publishing will lead to a scholarly publishing system that works as a 'vanity press'." The argument is that there will be pressure to publish poor quality papers if there are publication fees – that open access publishing is a "race to the bottom" where people will publish anything.

Counterargument: It's already true that you can publish any article somewhere, if you are willing to go to the poor-quality journals. OA publishing has a very different set of pressures than vanity publishing. For a vanity press, there's an inverse correlation of standards and cost. The author wants to buy access to distribution of his/her work. This is not true for articles; authors are buying prestige, not distribution.

In open access publishing, prestige correlates directly with cost – with the author willing to pay more to publish in a prestigious journal. The economics are the opposite of a vanity press.

This is what we see empirically: for example, high quality OA journals like BioMedCentral or PLOS titles charge up to \$3000 to publish an article; the lower end of the OA market, Bentham, charges about \$100.

The argument that all journals will sink to the bottom makes no empirical or economic sense. The question will be how to make sure what is good stuff and what is bad stuff, and as long as there's a range of journal quality, we'll be ok.

The part of the model we have now that does work is peer review. We need to maintain this. There are costs associated with creating an article, which come to, it is estimated, \$1K-2K, though no one really knows. (Wellcome Trust, a private research-funding organization, pays \$5K per article to Elsevier to make the articles open access.)

What we do know is that journals can be run on nearly zero revenue. At MIT, Leslie Kaelbling has edited the Journal of Machine Learning Research, managed by volunteers, and has spent less than \$4000 to pay for a domain name, tax professionals, lawyers, and accountants. The journal was #1 in artificial intelligence for quite a while.

Costs can be absorbed. Editors volunteer; server space is given up as part of a university's overall maintenance of a network; authors typeset their own work (as is common in computer science). Universities and funding agencies can pay the costs, just as they do now by paying for journal subscriptions.

Publication fees will exclude some writers who can't pay from publishing in open access journals. However, almost all open access journals that have publication fees also have waivers for those who can't pay. These waivers are not widely used, but are available from virtually all open access journals. Also, some institutions and funders have created funds to pay publication fees for authors. For an example of this, see the five-university OA compact that was recently signed: <http://www.oacompact.org/>

What is the next step to reform the system? What are the barriers to this next step?

The vision of the next step is to have the business models emerge. Currently, a model in which authors pay submission charges to OA journals is working in some STM fields. Also, subscription fees could be made available to pay for open access fees (e.g. fees associated with maintaining the OA database). This would offer all kinds of nice benefits, but there is a missing link in the argument: it is difficult, particularly for smaller publishers with tight margins, to make the change from the current subscription model to open access.

The risk that moving to open access might cause a drop in revenues creates a barrier to transitioning to an open access model. We therefore need to grease the process of movement to an open access business model.

What would the transition look like? For universities, one step would be for the university to pay open access charges – this reduces the risk for a publisher to switch business models, if they know OA fees will be covered if authors won't or can't pay or funders don't pay.

In the case at hand, FRPAA will provide a significant impetus to explore the OA model by mandating open access to government-funded research. It makes sense to start this way, as it is logical that taxpayers should have access to work they have funded.

Recent history of the scholarly publishing industry in visual form:

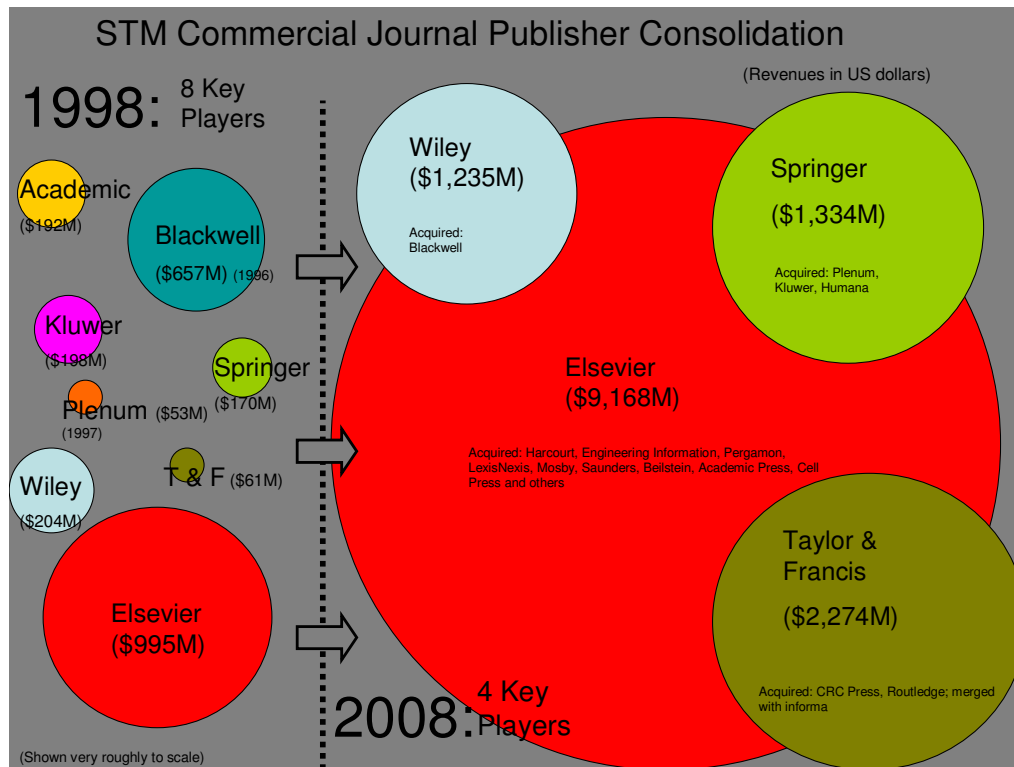
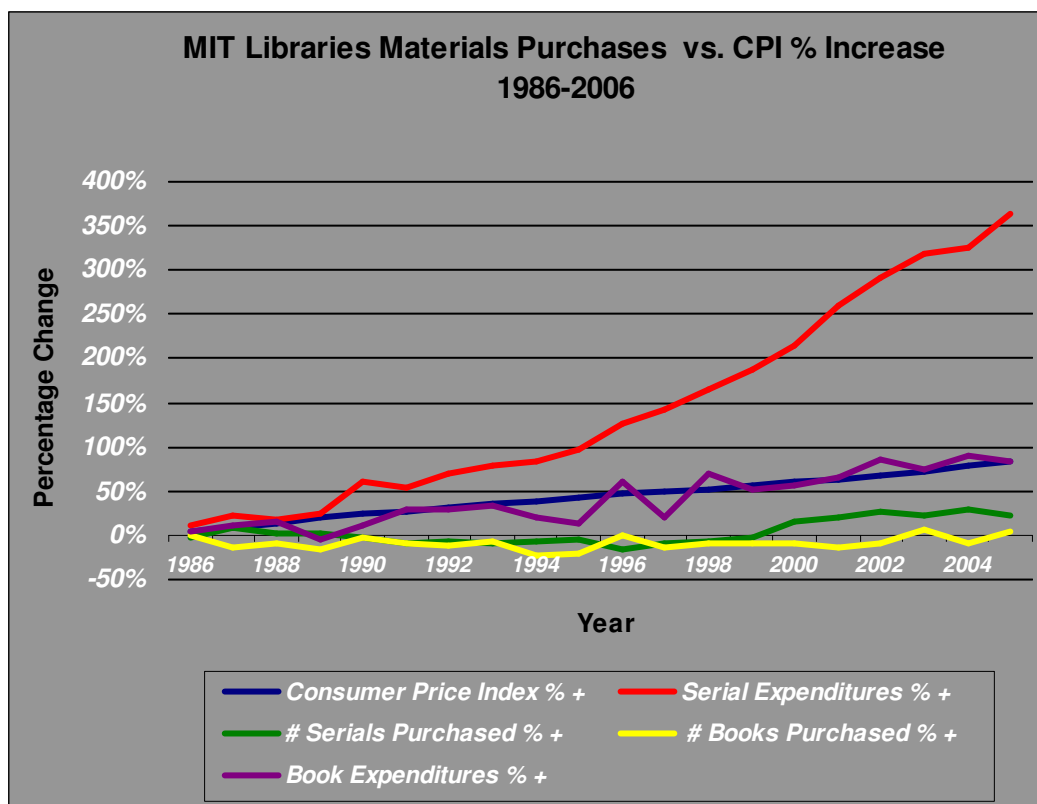


Figure 1. Since 1998, the scholarly publishing industry has greatly consolidated. Its major players are now multi-billion-dollar companies. Those that are publicly-held are legally obligated to turn profits and maximize their shareholders' value.

Case study: the growth of expenditures for journal subscriptions at MIT greatly outpaced the Consumer Price Index between 1986 and 2006.



Note 1: serial = scholarly journal subscription

Note 2: the Consumer Price Index tracks inflation

Figure 2. While the MIT libraries' book expenditures have kept pace with the Consumer Price Index, expenditures for scholarly journal subscriptions have vastly outpaced it. The numbers of books and subscriptions purchased each year have remained nearly constant.

Key concept: journals have much more to fear from their own price increases than from OA archiving. If raising the risk of cancellations can be blamed for undermining peer review, then publishers are far guiltier than funding agencies with OA mandates.

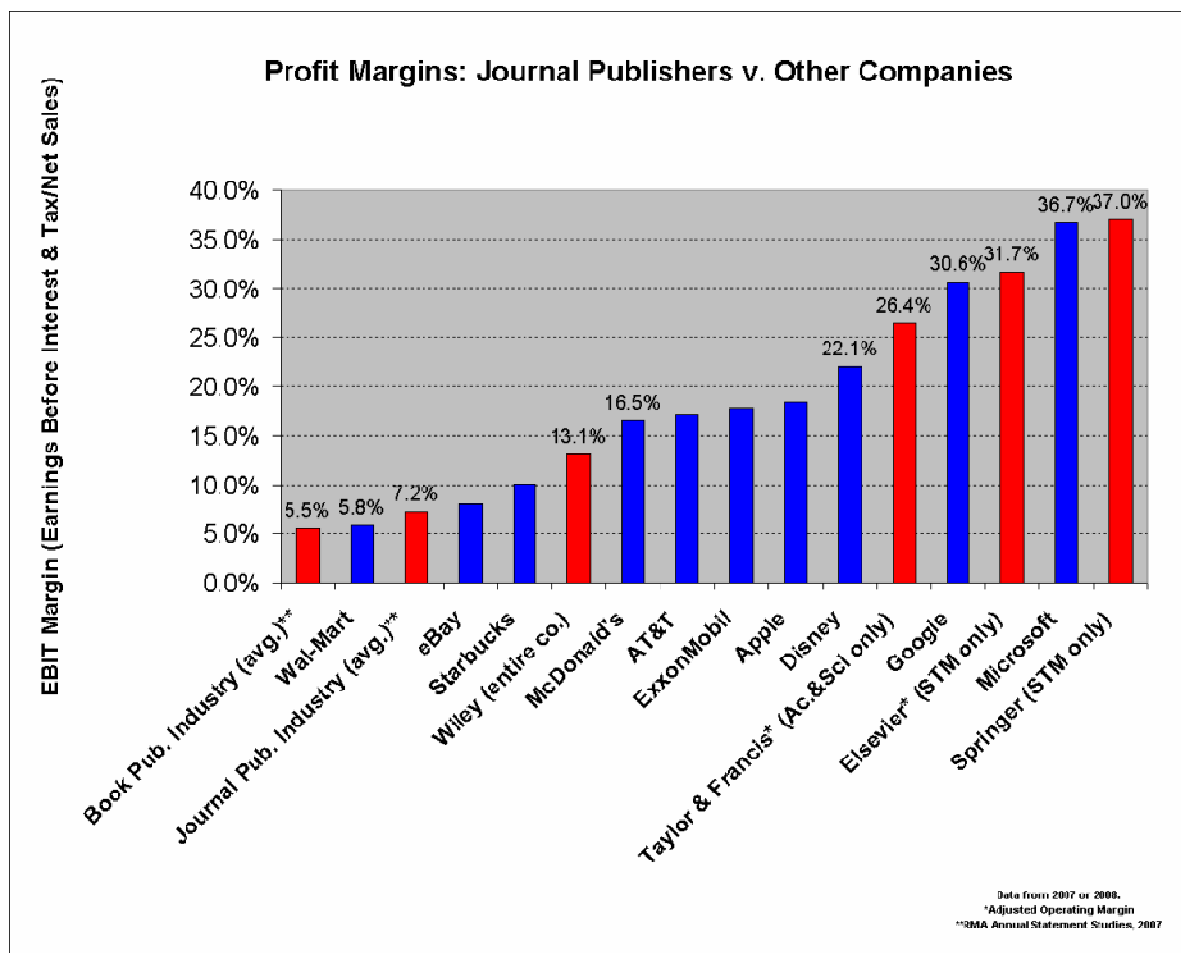
Table 1. The price per page of institutional subscriptions to for-profit journals versus non-profit journals.

Field (year, # journals)	Price/Page		
	For-profit	Joint	Non-profit
Ecology (2000, n=78)	\$1.19	\$0.70	\$0.19
Economics (2000, n=156)	\$0.81	\$0.42	\$0.16
Atmos. Sci. (1999, n=34)	\$0.95		\$0.15
Mathematics (2000, n=171)	\$0.70		\$0.27
Neuroscience (1997, n=71)	\$0.89		\$0.10
Physics (1997, n=93)	\$0.63		\$0.19

[From Carl and Ted Bergstrom:

http://octavia.zoology.washington.edu/publishing/other_pageprice.html]

Such high inflation rates (Figure 2) and prices per page (Table 1) mean libraries are trying to cut back on subscriptions to reduce costs.



Note 1: STM = scientific, technical, and medical

Note 2: "STM only" means the data is only for the company's STM business unit; some publishers also generate earnings from other businesses outside journal publishing

Figure 3. A number of high-profile journal publishers have profit margins that dwarf those of other well-known publicly-held companies.

Responses to an International Association of Scientific, Technical, and Medical Publishers (STM) briefing about open access:

<http://openaccess.eprints.org/index.php?/archives/506-STM-Publisher-Briefing-on-Institutional-Repository-Deposit-Mandates-Re-Posted.html> (Note that “IR” means “Institutional Repository,” which is the actual place online where an institution stores its OA articles, theses, books, etc. At MIT, for example, the IR is named DSpace.)

Another response to this STM briefing, with the complete briefing included:

<http://www.earlham.edu/~peters/fos/2009/01/more-on-stm-briefing-document-on-irs.html>

For possible scenarios of transition to OA: <http://www.nature.com/nature/debates/e-access/Articles/harnad.html#B1>

Site about open access: <http://www.eprints.org/openaccess/>

Recent five-university OA compact: <http://www.oacompat.org/>

Letter from 57 liberal arts college presidents, endorsing FRPAA:

http://www.oberlingroup.org/files/FRPAAPresidentsletter2009FNL_1.pdf